Southern Forest Pest Reporter

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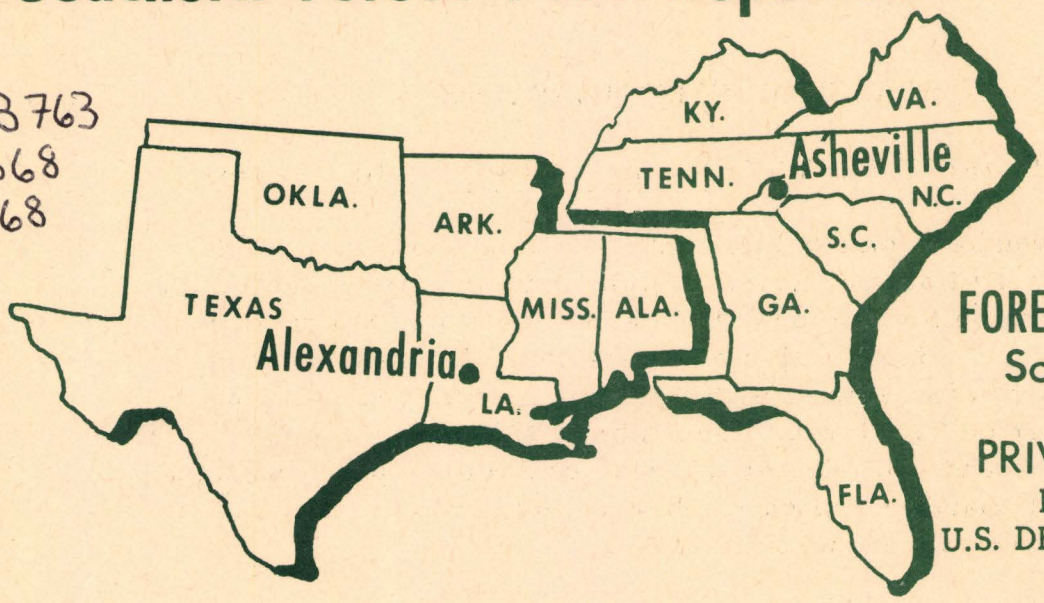
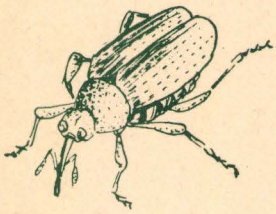


DIVISION OF
FOREST PEST CONTROL
Southeastern Area
STATE AND
PRIVATE FORESTRY
FOREST SERVICE
U.S. DEPT OF AGRICULTURE

FIELD OFFICES
Asheville, N.C.-Alexandria, La.

Number 1 | 50-7th ST. N.E. ATLANTA, GEORGIA 30323 | February 1969



SUMMARY OF CONDITIONS

... Southern pine beetle infestations are present on National Forest land in Alabama, North Carolina, South Carolina, Tennessee and Texas, on private land in Georgia, Louisiana, North Carolina, South Carolina, and Texas, and on National Park land in Tennessee. Control crews are emphasizing removal of infested material by commercial sales. The southern pine beetle infestation in Texas is the worst since 1962. Approximately 43,000 trees have been salvaged on National Forest land in Texas since July, yielding 1,520 M board feet of sawtimber and 2,620 cords of pulpwood. On private land in Texas 236,035 infested trees were treated during 1968.

... A statewide survey conducted by the Florida Forest Service indicated that bark beetles, Primarily Ips resulted in a loss of 293,853 cords of wood during the year.

... Results of an aerial survey by the Texas Forest Service shows that only 10 percent of their pine plantations are over twenty years old and that 96 percent of the plantations thinned 3-5 years were infested with Fomes annosus.

... Approximately 70 percent of the 250,000 five month-old yellow poplar seedlings at the Edwards State Nursery at Morganton, North Carolina were infested with Cylindrocladium scoparium.

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STATUS OF FOREST INSECTS

SOUTHERN PINE BEETLE, Dendroctonus frontalis, Zimm.

ALABAMA

The southern pine beetle continues to be a problem on the Bankhead National Forest. A September survey showed the infestation level to be 2.13 infested trees per M acres of host type. Suppression by direct control measures, and removal of infested material is being continued. During the period July through December, 370 trees were chemically treated and 4,819 infested trees, containing approximately 500 M board feet of sawtimber and 40 cords of pulpwood were removed by commercial sales.

Beetle population levels on the Talladega National Forest have been considered endemic since 1966. Chemical control projects on this area were recently terminated. During the period July through December, 3,257 trees in 170 spots were treated chemically or salvaged. The volume of timber salvaged was approximately 125 M board feet of sawtimber and 119 cords of pulpwood.

GEORGIA

Southern pine beetle infestations have increased on private lands in Madison, Elbert, Franklin and Hart Counties. A 100 percent survey made by the Georgia Forestry Commission showed that there were 183 spots containing 28,587 dead and dying trees. Spots varied in size from five to 1,800 trees.

Prompt harvesting of beetle infested trees is being used to bring the outbreak under control. Activity in the middle and western Piedmont area of the State continues at a low level. (Georgia Forestry Commission).

Southern pine beetle activity remains at a low level on the Tallulah and Chattooga Districts of the Chattahoochee National Forest. A detection survey showed that infestations of the southern pine beetle were also present on the Brasstown Ranger District. This is the first report of beetle activity on the District in five years. The intensity of infestation is estimated at 2.57 trees per M acres.

LOUISIANA

Control operations continue on private land in LaSalle, Catahoula, Caldwell, Grant, Allen, and Calcasieu Parishes. Recent surveys of these areas show the number of infested trees per M acres to range from 2.13 in Allen Parish to 27.0 in LaSalle and Catahoula Parishes. High brood densities and ratios of increase between parent adults and brood indicated an increasing population. Intensified winter control measures, with emphasis on removal of infested material by commercial sales, are being utilized to minimize losses.

The beetle population in East and West Feliciana Parishes collapsed and direct control projects have been terminated. Salvage operations are being continued, where practical, by some landowners.

Small southern pine beetle infestations were detected on private lands in the southeastern portion of Natchitoches Parish and the Kisatchie District, Kisatchie National Forest. Radiographic analysis of bark samples from infested trees in this area revealed a brood density of 577 insects per ft.^{2} of bark surface and a ratio of increase of 1:9. This indicates a potential for epidemic conditions this spring.

Southern pine beetle activity was detected on private lands in Morehouse Parish in the northeastern portion of Louisiana. An aerial reconnaisance survey revealed 12 spots in one township ranging in size from single trees to groups of 40 red-topped and fading pines. One of the spots is within 3/4 mile of the Arkansas State Line.

MISSISSIPPI

Beetle infestations are continuing at a low level on the Homochitto National Forest and adjoining private land. Since July, 1, 344 spots - containing 2, 920 trees - have been controlled on National Forest land. Five hundred and forty M board feet of beetle infested sawtimber, and eight cords of pulpwood have been removed by commercial sales.

NORTH CAROLINA

Populations of the southern pine beetle continue to persist in the coastal plain, activity is slowly increasing with all areas reporting fading and green infested trees. A recent survey of Rutherford County detected 25 active beetle spots. This is the first report of beetle activity in the county in recent years. In Cleveland County, some 200 active spots were detected. Increased beetle activity was also reported in Cabarrus, Mecklenburg, Guilford, Iredell, Granville, and Yadkin Counties. (North Carolina Division of Forestry).

In the mountains, epidemic populations of the southern pine beetle occur in Cherokee, Graham, and Swain Counties. Overwintering beetle brood densities are high, averaging 420 insects per square foot of bark surface. Woodpeckers have been actively feeding on the beetle broods, however, they are not expected to be effective in reducing beetle populations to endemic numbers. (See photos page 12) Heaviest centers of infestation occur on the Tusquitee and Cheoah Districts, Nantahala National Forest and north side of Fontana Reservoir in Great Smoky Mountains National Park. Spots range in size from one to 2,000 trees.

An all-out effort to control the outbreak is being made by the U. S. Forest Service and North Carolina Division of Forestry. Emphasis is placed on harvesting infested trees where economically possible and piling and burning the rest. Some chemical treatment may be necessary. The outbreak in Great Smoky Mountains National Park is in an inaccessible area, making control impractical.

SOUTH CAROLINA

Southern pine beetle populations continue to persist in Greenville, Spartanburg, and Pickens Counties. Prompt harvesting of beetle infested trees in Spartanburg has greatly lessened the chances of a beetle outbreak re-occurring during the 1969 growing season (South Carolina Forestry Commission).

The Andrew Pickens District has stepped up their efforts to bring the beetle outbreak on the Sumter National Forest under control. In addition to harvesting 140 MBF of infested timber, the District has chemically treated 2,300 infested trees. Suppression work is still underway.

SOUTH CAROLINA (Cont.)

Southern pine beetle populations on the Long Cane, Tyger, and Enoree Districts, Sumter National Forest, has collapsed. Intensive suppression efforts by the Districts plus unfavorable weather conditions attributed to the sudden decline in beetle populations.

TENNESSEE

An outbreak of the southern pine beetle on the Tellico Ranger District, Cherokee National Forest, was detected and evaluated in December, 1968. The survey showed that there were approximately 3.5 infested trees per M acres with an average brood density of 300 insects per square foot of bark surface. A control program is being initiated on the District.

The southern pine beetle outbreak in the Cades Cove area of the Great Smoky Mountains National Park continues to persist. There are many spots containing more than 300 beetle infested trees. The outbreak is in a remote area of the Park, making control impractical.

TEXAS

Southern pine beetle populations continue at major epidemic levels on the Angelina and Sabine National Forests. The heaviest losses are occurring on the Angelina District. Surveys made in October show the number of infested trees per M acres of host type to be 311 on the Angelina District, and 61 and 48 on the Yellowpine and Tenaha Districts, respectively. Brood densities and ratios of increase are high and indicate a potential for increased losses. Vigorous control measures, with emphasis on removal by commercial sales, are continuing. Since July approximately 43,000 infested trees with a volume of 1,520 M board feet of sawtimber and 2,620 cords of pulpwood, have been salvaged from these forests. Three thousand six hundred and ninety five trees were chemically treated on spots where removal was impractical.

Beetle populations have declined to near endemic levels on the Big Thicket District of the Sam Houston National Forest. Approximately 1,767 infested trees have been chemically treated or salvaged since July. The volume of insect infested timber removed by commercial sales was 28 MBF of sawtimber and 92 cords of pulpwood.

TEXAS (Cont.) The beetle outbreak on private lands in east Texas continues at epidemic proportions. Vigorous control programs, including brood tree utilization and chemical suppression, are being undertaken.

During the period October through December, 426 infestations - containing 70,542 trees - were controlled. During calendar year 1968, 2,993 spots - containing 236,035 infested trees - were suppressed. Southern pine beetle activity was at a higher level in 1968 than at any time since 1962.

VIRGINIA Salvage is being used to bring a southern pine beetle outbreak in Halifax and Mecklenburg Counties under control. Activity is also reported in Campbell County (Virginia Division of Forestry).

BLACK TURPENTINE BEETLE, Dendroctonus terebrans (Oliv.)

ALABAMA An evaluation of the status of black turpentine beetle infestations on the National Forests in Alabama revealed a low level of infestation. The proportion of trees with successful attacks ranged from 0 to 3.8 percent in recently logged areas. Chemical control activities were terminated.

ARKANSAS Black turpentine beetle activity was reported on private lands near Crossett. An evaluation of recently logged areas in this vicinity revealed that an average of 3-percent of the residual trees had been successfully attacked. Salvage operations are being conducted in this area in an attempt to reduce losses.

FLORIDA Results of the State's annual forest insect survey indicate a slight increase in turpentine beetle activity since last year.

GEORGIA Two stands in Worth and Colquett Counties averaging 120 acres are being heavily damaged by the black turpentine beetle. Forty percent of the spots in a recent survey of the Fort Benning Military Reservation were the result of turpentine beetle activity. The spots were centered around trees struck by lightning or damaged in logging.

LOUISIANA — Observations conducted in recently disturbed stands on the Catahoula, Kisatchie, and Winn Districts of the Kisatchie National Forest revealed that a low proportion of residual trees contained successful attacks. Chemical control activities were terminated on the Kisatchie National Forest.

MISSISSIPPI — Infestation levels of the black turpentine beetle in logging areas on the Homochitto and DeSoto National Forests were very low. The proportion of residual trees with successful attacks averaged 2.7 percent on the Homochitto National Forest, and 4.8 percent on the DeSoto National Forest. Chemical control of black turpentine beetle infestations was terminated on all Districts of the National Forests in Mississippi.

NORTH CAROLINA — Significant damage is attributed to the black turpentine beetle in Cleveland, Davidson, Davie, Gates, and Rowan Counties.

VIRGINIA — Turpentine beetles are attacking a half acre in Fluvanna County.

IPS ENGRAVER BEETLES, *Ips* sp.

ARKANSAS — Aerial and ground detection surveys of the Ozark-St. Francis and Ouachita National Forests revealed scattered infestations of *Ips avulsus* (Eich.) and *I. grandicollis* (Eich.)

FLORIDA — A state-wide survey was conducted by the Florida Forest Service to determine timber losses. Results of the survey indicated that bark beetle attacks primarily by species of *Ips* resulted in a loss of 293,853 cords of wood during the past year. Surveys of the National Forests in Florida showed *Ips* populations to be above normal on the Ocala and Appalachicola National Forests. There were an estimated 14.5 infested trees per M acres of host type.

GEORGIA — *Ips* are presently attacking five-to-fifteen-year old plantations in the Piedmont section of the State. A late summer epidemic of *Ips avulsus* occurred in plantations on the Armuchee District of the Chattahoochee National Forest. Some of the spots included 150 trees.

An *Ips* outbreak has caused devastating damage to slash pine, *Pinus elliottii* Engelm. plantations within a three mile radius of Clyattville, Georgia. Clyattville is located in Lowndes County in South Georgia. This area of the state has been

GEORGIA (Cont.) experiencing drought conditions for the past three years. There are two species involved, Ips avulsus Eich. and Ips calligraphus Germ. I. avulsus being the primary causal agent and I. calligraphus secondary. Plantations up to 40 acres have been clear cut due to complete infestation by these insects.

MISSISSIPPI Locally severe infestations of I. avulsus were detected in the northern half of the Holly Springs National Forest.

NORTH CAROLINA Ips activity has been reported throughout the State. In most cases attacks are associated with southern pine beetle infestations.

TENNESSEE Surveys on the Oak Ridge Atomic Energy Commission Reservation indicated that there were 72 spots with 1,625 trees attacked by Ips avulsus. Most of the attacks occurred in areas being thinned. Some spots of Ips killed trees were found on the Tellico District of the Cherokee National Forest. The spots were adjacent to recently logged areas.

A WEEVIL - Pissodes sp.

TEXAS Locally severe feeding injury by a weevil, Pissodes sp., probably nemorensis Germ. is causing mortality of young loblolly pine reproduction on the Angelina National Forest, and on private lands in Angelina County. Occasionally trees up to 50 feet tall have exhibited signs of feeding injury. In many areas feeding injury was restricted to the leaders of open grown loblolly pines. This is the second consecutive year that infestations of this weevil have occurred in Angelina County. (Texas Forest Service).

NANTUCKET PINE TIP MOTH, Rhyacionia frustrana Comst.

VIRGINIA Heavier than usual damage is reported in Patrick and Henry Counties. Damage is heavy in the eastern end of Lunenburg County and severe in a 25 acre plantation in Louisa County.

PINE SAWFLIES, Neodiprion sp.

TEXAS A 125-acre mixed slash and loblolly pine plantation north of Houston was defoliated by the red-headed pine sawfly Neodiprion lecontei (Fitch). Loblolly pine was completely defoliated, but only light defoliation occurred on the slash pines. (Texas Forest Service).

WALKINGSTICK, Diapheromera femorata (Say)

OKLAHOMA — Approximately 10,000 acres of hardwoods, predominantly red oaks, were defoliated by walkingsticks on Winding Stair Mountain on the Ouachita National Forest. Defoliation ranged from light to moderate.

MISCELLANEOUS INSECTS

TEXAS — Pine aphids, Cinara sp. were locally abundant in portions of east Texas.

OKLAHOMA — Light defoliation of the fall webworm, Hyphantrea cunea (Drury) occurred on persimmon and other hardwoods on the Platt National Park and the Arbuckle Recreation Area.

The hickory twig girdler, Oncideres cingulata (Say) girdled branches of elm, hickory and pecan on the Platt National Park.

STATUS OF FOREST DISEASES

ANNOSUS ROOT ROT, Fomes annosus (Fr.) Cke.

SOUTH CAROLINA — Numerous 1-10 tree Fomes annosus infection centers were observed in several slash pine plantations during the recent evaluation of disease conditions on the Savannah River Project, AEC. One isolated infection center in a slash pine plantation thinned in 1967, had 20 trees with F. annosus conks. Eight of these infected trees were dead and 12 were living.

TEXAS — International Paper Company has reported clear cutting a 145-acre 20-year-old pine plantation in Nacogdoches County because of F. annosus infection. The plantation had not been thinned.

Results of an aerial survey by the Texas Forest Service show that of 2,400 pine plantations in the 11.5 million acre pine-hardwood type of east Texas, 10 percent are over 20 years old, and 8.3 percent have been thinned. Seventy-six percent of the thinned plantations are infected with F annosus. Of those thinned three to five years previous to the survey, 96 percent are infected with F. annosus.

CYLINDROCLADIUM ROOT ROT

NORTH CAROLINA — The cause of the yellow-poplar seedling problem at the Edwards State Nursery in Morganton has been diagnosed as Cylindrocladium scoparium Morgan. Approximately 70 percent of 250,000 five-month-old yellow-poplar seedlings were infected. The majority of these seedlings were dead. The 27 affected nursery beds were treated with the soil fumigant MC-33 (methyl bromide - 67% and chloropicrin - 33%) at a dosage rate of 300 lbs./acre last Fall. The standard nursery soil fumigant, methyl bromide at 300 lbs./acre, applied last Spring before seeding the yellow-poplar was apparently ineffective in controlling C. scoparium. A post-control evaluation of the MC-33 treatment is scheduled.

WHITE PINE BLISTER RUST

VIRGINIA — The white pine blister rust evaluation has been completed on the Jefferson National Forest. Eight one-square-mile control grids were randomly sampled. Blister rust or its alternate host, ribes, was not found on any of the grids. Therefore, the postponement of all ribes eradication work on the Forest is recommended.

FUSIFORM RUST

SOUTH CAROLINA — A recent evaluation of disease conditions on the Atomic Energy Commission Savannah River Project revealed a severe incidence of fusiform rust in 10-to-12-year-old slash pine plantations. Eight slash pine plantations had 50-70 percent of trees with fusiform rust stem cankers.

DUTCH ELM DISEASE, Ceratocystis ulmi (Buism.) C. Moreau

ALABAMA — Dutch elm disease was detected on an American elm Ulmus americana L. at Fort McClellan Air Force Base in Calhoun County.

MISCELLANEOUS DISEASES

ALABAMA — Black root rot, caused primarily by Sclerotium batiticola Taub, and Fusarium spp. was found on slash and loblolly pine seedlings at the Hauss Nursery, State of Alabama, near Atmore, Alabama. An estimated 15 percent cull is attributed to black root rot in some areas of the Nursery.

VIRGINIA

A recent hardwood stem canker disease survey conducted in the Mt. Rogers Recreation Area on the Jefferson National Forest revealed a relatively high incidence of stem cankers on chestnut and scarlet oaks. Twenty-six percent of 225 oaks had visible cankers or were defective. Cankers observed were characteristic of Polyporus hispidus and Strumella coryneoidea. Polyporus hispidus conks were found on several trees. Dissection of selected cankered trees showed the interior rot extending several feet above and below stem cankers.

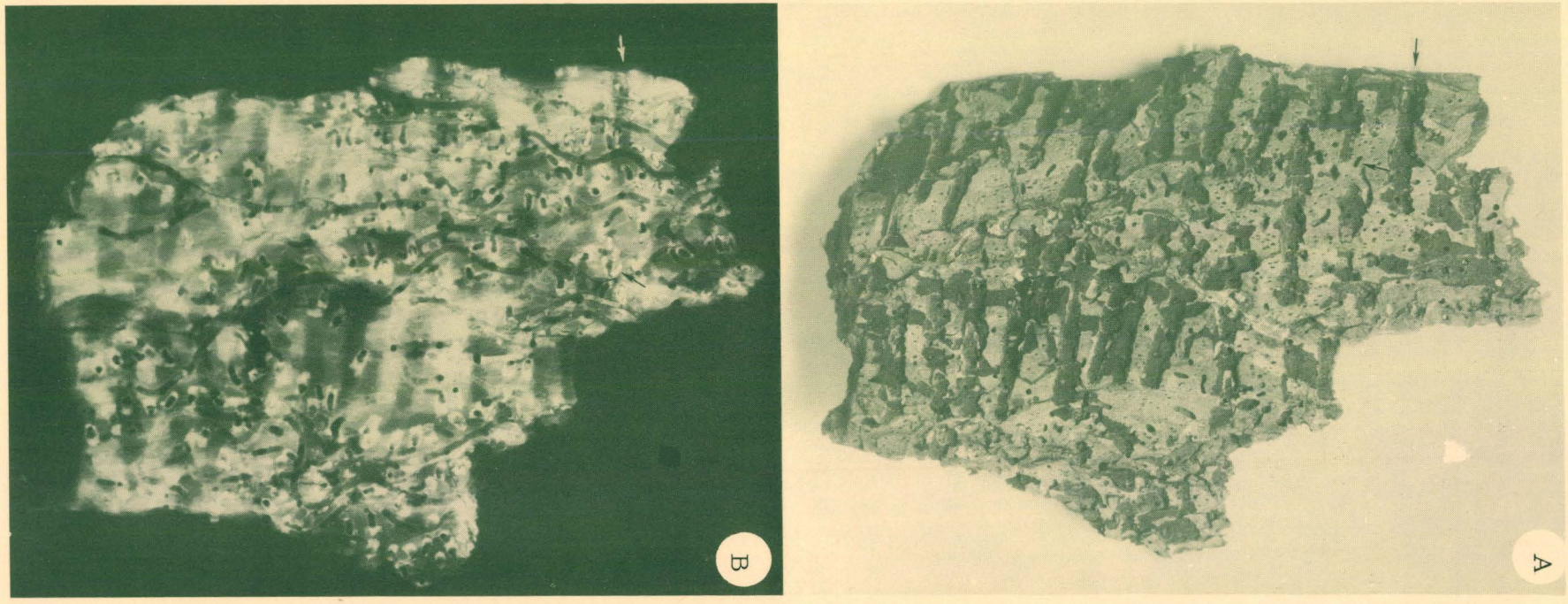

Figure 1. How effective is predation by woodpeckers? Woodpeckers are recognized as the most important predator of bark beetles. Just how effective they are is difficult to assess visually. X-rays of bark samples help overcome this handicap.

Photo A. shows a picture of a piece of bark on which woodpeckers have removed a great deal of bark to feed on the overwintering southern pine beetle broods.

Photo B. is a radiograph (X-ray) of the same piece of bark. Brood (larvae and pupae) that were missed by the woodpeckers is easily identified. The dark lines on the radiograph are areas where most of the bark was removed by the woodpeckers.

More detailed information can be obtained by writing to The Forest Pest Control Division Field Offices listed below or to the Atlanta Office:

FIELD OFFICES	FOR STATES OF:
Asheville Office Amel E. Landgraf Zone Supervisor U. S Forest Service Div. of Forest Pest Control Post Office Box 5895 Asheville, North Carolina 28803 Phone: (704) 254-0961 Ext. 625	Florida Georgia Kentucky North Carolina South Carolina Tennessee Virginia
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